Further List of Corrections suggested by M. Jenkins to Prof. Sylvester's Constructive Theory of Partitions.

American Journal of Mathematics, Vol. V, Nos. 3 and 4.

Vol. V, No. 3, p. 255, 8 lines from end, $2n-(i+3)$ should be $n-(i+3)$.

Page 256, between 2d and 3d rows of sinister table insert 13.2.0

" " " 7th and 8th " " " " 11.2.2

" " in 6th row of dexter table, for 8.4.3(2) write 8.4.3(1).

" 261, line 11 from the end, interchange protraction and contraction so as to read "*contraction* could not now be applied to A' and B' nor *protraction* to C'."

" 263, line 21. If $f(x)=(1-x)(1-x^3)(1-x^3)(1-x^7)(1-x^9)$, for the second x^3 read x^5.

" " line 25, for 'latter' read 'former'.

" 265, line 29, for l^τ read l^λ.

" 270, line 11, for $1+2$ read $i+2$.

" " line 12, for $1+2$ read $i+2$.

" 272, line 7, for $X_j x^{\frac{i^2+i}{2}}$ read $X_j x^{\frac{j^2+j}{2}}$.

" " line 14, for 'the minimum negative residue of $i-1$' read $i+1$.

" 274, line 6 from end, for $\frac{x^{\frac{1}{2}n(n+1)}}{1-x^n}$ read $\frac{x^{\frac{1}{2}r(r+1)}}{1-x^r}$.

" 275, line 9, for 'to the 5th now' read 'to the 5th row now.'

" 276, line 21, for 15, 7, 3 read 13, 11, 3.

" " line 22, for $(1+ax)(1-ax^3)(1-ax^j)\ldots$ read $(1+ax)(1+ax^3)\ldots(1+ax^{2j-1})$.

" " line 24, for $\frac{x}{1-x}\alpha$ read $\frac{x}{1-x^2}\alpha$.

" " line 25, for 'angle whose *nodes* contain i nodes' read whose *sides*.

Page 277, line 9, for 'with $j-i$ or fewer parts' read $j-1$.

" " line 14, for $1+\frac{1-x^{\omega+1}}{1-x^2}x^{\omega}+\frac{1-x^{\omega+1}.1-x^{\omega+3}}{1-x.1-x^4}x^{\omega+1}$ etc.

read $x^{\omega}+\frac{1-x^{\omega-1}}{1-x^2}x^{\omega+1}+\frac{1-x^{\omega-1}.1-x^{\omega-3}}{1-x^2.1-x^4}x^{\omega+4}+$ etc.

If in the expression in line 11, viz. in

$\frac{1-x^{2i-2j+2}.1-x^{2i-2j+4}\ldots 1-x^{2i-2}}{1-x^2.1-x^4\ldots 1-x^{2j-2}}x^{j^2-2j+2i}$, we put $j=3$ we obtain

$$\frac{1-x^{2i-4}.1-x^{2i-2}}{1-x^2.1-x^4}.x^{9-6+2i}=\frac{1-x^{2i-2}.1-x^{2i-4}}{1-x^2.1-x^4}.x^{2i+3}=\frac{1-x^{\omega-1}.1-x^{\omega-3}}{1-x^2.1-x^4}.x^{\omega+4},$$

since $\omega=2i-1$, and similarly for other terms when we put $j=2$ and $j=1$.

The correction which I offer seems to me to be right, and the expression in the paper to give a wrong result in the case when n happens to be equal to $\omega+2$: for then the number of parts being supposed to be exactly i, the first bend contains $2i-1$ or ω nodes, and there is then no way of placing the remaining 2 nodes so as to make the partition a conjugate partition—supposing I have not misunderstood the article.

Page 278, line 13, for 19, 7, 6, 6 read 10, 7, 6, 6.

" 279, figure, either insert a node at junction of 5th column and 7th row or remove a node from junction of 7th column and 5th row.

" " lines 6 and 7, if we remove a node from the figure no change is required in these two lines; but if we insert a node in the figure, then 11 11 11 7 3 3 should be 11 11 11 7 5 3 and 5 5 5 3 1 1 should be 5 5 5 3 2 1.

" 280, line 5 from end, after $\frac{1}{1-ax.1-ax^2\ldots 1-ax^{\theta}}$ insert 'or of $x^n a^j$.'

" 283, line 3, for a^j read a^{θ}.

" " line 4, for $(x^{\theta}+ax^{1\theta})\}$ read $(x^{\theta}+x^{2\theta})$.

" 285, line 1, for $\frac{l_1(2-j-1)}{2}$ read $\frac{l_1-(2j-1)}{2}$.

" " line 6 from end omitting notes, for x^n read $x^{\frac{n}{2}}$.

" " line 7, for x^{2i+1} read x^{2i+2}.

" 288, a_i-i is, I believe, the right final term; but it appears as if it were the first of a pair instead of the last of a pair, a_i-i being a quantity which may vanish.

If the pair of expressions which in the text precede $a_i - i$, if definitely expressed and not left to be understood, should be

$$[a_{i-1} + \alpha_{i-1} - (2i-3)],\ [a_{i-1} + \alpha_{i-2} - (2i-2)],$$

and not as in the text $[a_{i-1} + \alpha_{i-1} - (2i-1)]$, $[a_{i-1} + \alpha_i - 2i]$, the factor which should precede $a_i - i$ is $[a_i + \alpha_i - (2i-1)]$.

I do not quite follow the first 5 lines of p. 289 (in No. 4), possibly from the oversight in the subscripts I do not see what is intended. But in seems to me the following proof would be right:

The expressions of the same form succeeding $a_1 + \alpha_1 - 1$ and $a_1 + \alpha_2 - 2$ must be continued so long as they are positive, and must be rejected when they become negative.

Now from the fact of i being the content of the side of the square belonging to the transverse graph $a_i =$ or $> i$, $\alpha_i =$ or $> i$, therefore $a_i + \alpha_i - (2i-1)$ is positive and is therefore one of the terms of the series. Also $a_{i+1} =$ or $< i$ and $\alpha_{i+1} =$ or $< i$, therefore $a_{i+1} + \alpha_{i+1} - (2i+1)$ is negative and must consequently be rejected.

The intermediate expression is $a_i + \alpha_{i+1} - 2i$; and for this we may in all cases put $a_i - i$ as the last term of the series for the following reason:

If the extreme inside bend have more than one node in the row, then $\alpha_{i+1} = i$ and $a_i + \alpha_{i+1} - 2i$ is $= a_i - i$, which is not negative since $a_i =$ or $> i$. If the extreme inside bend degenerate, so that it consists only of a vertical line or of a single point, then $a_i = i$; and since $\alpha_{i+1} < i$ in this case, therefore $a_i + \alpha_{i+1} - 2i$ is negative and inadmissible as a term in the series; but since $a_i - i = 0$ there is no harm in putting it as the final term in the series.

VOL. V, NO. 2, ON SUBINVARIANTS, *i. e.* SEMI-INVARIANTS TO BINARY QUANTICS OF AN UNLIMITED ORDER.

Page 114, last line, for 3100 read 3110.